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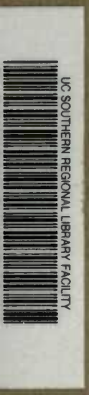

FORTY YEARS RECORD

— OF —

THE WEATHER

— AT —

CLEVELAND, OHIO.

BY G. A. HYDE,
VOLUNTEER OBSERVER FOR U. S. WEATHER BUREAU.

CLEVELAND, OHIO:
HILES & COGGSHALL, PRINTERS.
1896.

Respectfully

Gustavus A. Hyde

THE WEATHER

— AT —

CLEVELAND, OHIO.

WHAT IT HAS BEEN FOR FORTY YEARS.

SUMMARY OF

METEOROLOGICAL OBSERVATIONS.

TEMPERATURE, RAIN-FALL, SNOW-FALL,
SKY AND WIND.

BY G. A. HYDE,

VOLUNTEER OBSERVER FOR U. S. WEATHER BUREAU.

April 1, 1896.

The years, with us, roll on apace,
And we make **record of the** race;
Of **Wind** and **Sky**; of **Rain** and **Snow**;
Of **Heat and Cold**; which **all would know.**

FORTY YEARS of continued and systematic observations on the weather at Cleveland ought to contain a large amount of information of interest to the general resident public. To gratify those who are interested in the subject of this paper, the following data is presented.

This data should be kept for comparison with the weather in the future, but there are several items to which the reader's attention is drawn for present consideration.

Temperature, high and low, weekly, monthly and yearly averages. Yearly average in decades, showing that there are no uniform deviations from normal. Beginning of the summer and winter in decades showing that there is no gradual change of seasons, as many suppose. The time of the beginning and ending of the seasons in this locality, which has never been determined before.

Rain Fall. Attention is called to the unusual quantities per hour, day, week, month and year, and the period of no rain.

Snow Fall. The exceptional fall for one day; the amounts per month and year and the marked difference in the totals for the months and seasons.

Sky. The months and seasons that have the greatest and least cloudiness.

Winds. The prevailing directions at 7 a. m., 2 p. m., and 9 p. m., for month, season and year.

Observations from which this summary was prepared were commenced May 1st, 1855, and continued until the present time.

The hours of observation have been 7 a. m., 2 p. m., and 9 p. m., sun time.

Temperatures were taken with Fahrenheit thermometer.

A part of the maximum and minimum temperatures were furnished through the courtesy of Major W. B. Stockman, of the U. S. Weather Bureau, of this city.

TEMPERATURES.

The highest observed was 99 degrees, August 12th, 1881.

The highest average for one day was 87.8 degrees, July 17th, 1887.

The highest average for two consecutive days was 85.9 degrees, beginning July 16th, 1887.

The highest average for three consecutive days was 84 degrees, beginning July 15th, 1887.

The highest average for four consecutive days was 83.6 degrees, beginning June 24th, 1858.

The highest average for five consecutive days was 83.3 degrees, beginning June 23d, 1858.

The highest average for six consecutive days was 82.6 degrees, beginning June 22d, 1858.

The highest average for seven consecutive days was 80.8 degrees, beginning June 22d, 1858.

The highest average for fourteen consecutive days was 80.1 degrees, beginning June 20th, 1858.

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The highest average for one month was 76.7 degrees, beginning July 1st, 1868.

The highest average for two months was 74.7 degrees, beginning June 16th, 1858.

The highest average for three months was 72.7 degrees, beginning June 13th, 1868.

The highest average for one year was 51.2 degrees, in 1894.

The lowest observed was 20 degrees below zero, Jauuary 29th, 1873.

The lowest average for one day was 10 degrees below zero, January 29th, 1873.

The lowest average for two consecutive days was 7.2 degrees below zero, January 8th and 9th, 1856.

The lowest average for three consecutive days was 4.1 degrees below zero, beginning January 8th, 1856.

The lowest average for four consecutive days was 0.8 degrees below zero, beginning January 8th, 1856.

The lowest average for five consecutive days was 1.9 degrees above zero, beginning December 28th, 1879.

The lowest average for six consecutive days was 4.8 degrees above zero, beginning December 27th, 1879.

The lowest average for seven consecutive days was 5.7 degrees above zero, beginning January 18th, 1856.

The lowest average for fourteen consecutive days was 7.3 degrees above zero, beginning February 4th, 1875.

The lowest average for one month was 13.8 degrees above zero, beginning December 30th, 1856.

The lowest average for two months was 15.9 degrees above zero, beginning December 24th, 1855.

The lowest average for three months was 18.9 degrees above zero, beginning December 23d, 1855.

The lowest average for one year was 45.70 degrees, in 1875.

WEEKLY AVERAGES.

No. of Week of the Year.	MAXIMUM.		MINIMUM.		40 Years' Temp.
	Temp.	Year.	Temp.	Year.	
1	43.90°	1890	9.60°	1884	27.19°
2	42.16	1890	9.71	1893	25.73
3	41.07	1894	9.26	1857	26.97
4	44.64	1864	13.07	1857	26.94
5	44.01	1890	13.31	1856	26.22
6	39.99	1887	3.97	1895	27.53
7	43.16	1867	6.96	1875	29.30
8	39.81	1857	12.50	1885	30.05
9	50.43	1861	17.02	1884	31.48
10	53.26	1878	16.90	1856	33.29
11	49.54	1868	21.03	1894	34.05
12	46.56	1865	15.47	1885	35.22
13	46.27	1875	24.55	1856	38.34
14	55.90	1892	28.19	1881	42.50
15	56.23	1869	33.44	1885	45.92
16	64.34	1866	28.36	1875	48.32
17	61.10	1886	37.33	1874	50.10
18	68.57	1895	42.86	1890	52.64
19	67.60	1889	48.17	1885	56.61
20	70.19	1877	48.60	1888	57.45
21	71.11	1880	52.81	1883	61.21
22	74.60	1871	52.80	1889	63.15
23	73.96	1865	57.33	1869	64.78
24	76.34	1876	60.40	1855	67.23
25	78.10	1858	62.14	1881	69.35
26	81.21	1858	64.54	1892	71.45
27	77.79	1858	64.19	1892	72.24
28	78.39	1859	65.84	1865	72.26
29	79.00	1868	64.80	1871	71.56
30	78.43	1892	65.87	1871	72.02
31	79.70	1861	66.76	1891	71.59
32	80.36	1862	63.19	1884	71.40
33	74.94	1864	63.83	1879	69.16
34	74.94	1872	59.79	1866	68.58
35	74.04	1880	59.06	1885	66.68

WEEKLY AVERAGES.

(CONTINUED)

No. of Week of the Year.	MAXIMUM.		MINIMUM.		40 Years' Temp.
	Temp.	Year.	Temp.	Year.	
36	77.74°	1881	56.46°	1883	67.00°
37	74.96	1865	58.47	1879	64.62
38	70.37	1891	52.26	1875	61.46
39	74.00	1881	51.43	1893	58.85
40	69.36	1862	47.81	1876	56.80
41	68.01	1879	42.87	1876	53.54
42	63.96	1867	42.17	1869	51.61
43	58.99	1874	35.76	1869	47.93
44	56.27	1860	38.97	1878	46.08
45	52.39	1874	32.40	1869	44.20
46	49.41	1879	28.71	1880	40.20
47	50.29	1883	16.50	1880	36.11
48	51.40	1864	24.53	1872	34.80
49	45.66	1879	22.21	1882	33.67
50	45.99	1862	19.54	1868	32.48
51	48.67	1877	15.26	1872	29.58
52	42.86	1875	12.54	1880	29.27

MONTHLY—MAXIMUM AND MINIMUM.

MONTH.	MAXIMUM.			MINIMUM.		
	Temp.	Day.	Year.	Temp.	Day.	Year.
January, - -	70°	22nd	1874	0-20°	29th	1873
February, - -	72	16th	1883	0-15	11th	1885
March, - - -	76	2nd	1861	0- 5	3d	1868
		31st	1875			
		18th	1894			
April, - - -	86	30th	1872	15	17th	1875
May, - - -	93	30th	1879	28	1st	1876
June, - - -	96	28th	1874	37	6th	1894
July, - - -	97	7th	1874	48	9th	1894
August, - -	99	12th	1881	45	31st	1890
September, -	98	6th	1881	36	26th	1887
October, - -	88	1st	1877	24	25th	1889
					26th	1887
November, -	74	1st	1888	0- 4	26th	1857
December, -	68	31st	1875	0-14	22d	1872

MONTHLY AVERAGES.

MONTH.	MAXIMUM.		MINIMUM.		40 Years' Temp.
	Temp.	Year.	Temp.	Year.	
January, - -	40.10°	1880	14.73°	1857	26.83°
February, - -	37.55	1882	17.12	1885	28.73
March, - - -	43.58	1894	24.94	1856	34.50
April, - - -	53 80	1878	37.83	1857	46.63
May, - - -	65.77	1880	51.55	1867	57.92
June, - - -	73.61	1865	64.24	1867	67.86
July, - - -	77.70	1868	67.98	1871	71.89
August, - - -	74.04	1862	65.42	1866	69.54
September, - -	71.65	1881	58.98	1883	63 34
October, - -	58.83	1879	44.88	1869	51.93
November, - -	44.53	1859	31.91	1880	40.01
December, - -	42.17	1889	20.99	1876	31.39

YEARLY AVERAGES.

1st DECADE.		2nd DECADE.		3rd DECADE.		4th DECADE.	
Year.	Temp.	Year.	Temp.	Year.	Temp.	Year.	Temp.
1855	48.38°	1865	50.82°	1875	45.70°	1885	46.59°
1856	46.31	1866	48.85	1876	48 90	1886	48.66
1857	47.38	1867	49.06	1877	50.75	1887	49.42
1858	50.08	1868	47.20	1878	50.54	1888	48.22
1859	49.84	1869	48.00	1879	49.26	1889	50.01
1860	50.13	1870	49.55	1880	50.51	1890	50.74
1861	51.06	1871	49.23	1881	50.73	1891	50.47
1862	51.03	1872	47.80	1882	49.75	1892	48.93
1863	51.03	1873	47.93	1883	49.59	1893	49.14
1864	50.53	1874	49.76	1884	48.88	1894	51.20
Mean	49.58	Mean	48.82	Mean	49.46	Mean	49.34

Average temperature for forty years, 49.30 degrees.

Dividing the year into two seasons, warm and cold, of six months duration each, the warm season begins April 26th and has an average temperature of 63.95 degrees; and the cold season begins October 25th, and has an average of 34.89 degrees.

Dividing the year into four seasons of Spring, Summer, Autumn and Winter, Spring begins March 9th and continues 94 days and has an average of 48.67 degrees; Summer begins June 11th, with a daily mean of 65.49 degrees, and ends September 9th, with a daily mean of 66.38 degrees, a period of 91 days, and has an average of 70.04 degrees; Autumn begins September 10th and continues 89 days and has an average of 49.26 degrees; and Winter begins December 8th, with a daily mean of 32.03 degrees, and ends March 8th with a daily mean of 32.23 degrees, a period of 91 days, and has an average of 28.67 degrees.

The highest average for 91 days of Summer was 72.68 degrees, beginning June 13, 1864, and the lowest average for 91 days of Summer was 68.05 degrees, beginning June 2, 1883.

Taking the average for 40 years, the days of highest temperature are July 15th, 73.63 degrees; July 16th, 73.56 degrees and July 26th, 72.75 degrees; and the lowest are February 4th, 23.96 degrees, February 5th, 24.32 degrees, and January 9th and 10th each, 24.56 degrees.

The earliest beginning of Summer was May 20th, 1887, and had an average temperature of 71.95 degrees.

The latest beginning of Summer was June 26th, 1869, and had an average temperature of 69.65 degrees.

The longest Summer season, that had the average temperature of the 40 summers (70.04 degrees) occurred in 1864, commencing May 16th and ending September 23d, a period of 131 days; and the shortest Summer season occurred in 1883, commencing July 2d and ending July 29th, a period of 28 days.

The highest average for 91 days of Winter was 36.03 degrees, beginning January 1st, 1890, and the lowest average for 91 days was 18.90 degrees, beginning December 23d, 1855.

The earliest beginning of Winter was November 15, 1858, and had an average temperature of 31.09 degrees.

The latest beginning of Winter was January 10th, 1876, and had an average temperature of 32.77 degrees.

The longest Winter season, that had the average temperature of the 40 winters (28.67 degrees) commenced October 22d, 1855, and ended April 13th, 1856, a period of 175 days; and the shortest Winter season commenced December 30th, 1881, and ended January 11th, 1882, a period of 13 days.

The time of beginning of Summers and Winters in decades and their average temperatures are as follows:

DECADE.	SUMMER.		WINTER.	
	Mo. and Day.	Degree.	Mo. and Day.	Degree.
First, - - -	June 18th,	70.83	Dec. 8th,	29.14
Second, - -	June 5th,	70.30	Dec. 8th,	27.36
Third, - -	June 11th,	69.84	Dec. 8th,	29.78
Fourth, - -	June 10th,	69.54	Dec. 8th,	29.92
Average, - -	June 11th,	70.04	Dec. 8th,	28.67

RAIN-FALL—(INCLUDING MELTED SNOW.)

The most rapid rain-fall in forty years was 0.85 inch, and fell in 10 minutes June 3d, 1891, being at the rate of 5.10 inches per hour.

The greatest fall within one hour occurred August 15th, 1887, being 1.53 inches in 51 minutes, the most of which fell in 40 minutes.

The greatest fall in 10 hours was 3.13 inches, September 12th and 13th, 1878.

The greatest fall in one day, or 24 hours, was 4.67 inches, September 12th and 13th, 1878.

The greatest fall in one week was 6.49 inches, September 10th to 13th, inclusive, 1878.

The greatest fall in one month was 10.33 inches, in June, 1855.

The least fall in one month was 0.25 inch, in February, 1877.

The greatest fall in one year was 49.66 inches, in 1878.

The least fall in one year was 25.28 inches, in 1856.

The average rain-fall and melted snow for 40 years is 38.08 inches.

The longest period in which less than 0.01 inch of rain fell was 23 days, May 30th and June 21st, inclusive, 1864.

The least rain-fall in 34 days was 0.13 inch, May 26th and June 28th, inclusive, 1864.

The least rain-fall in 42 days was 0.42 inch, July 31st and September 10th, inclusive, 1881.

The least rain-fall in 49 days was 0.52 inch, July 24th and September 10th, inclusive, 1881.

The least rain-fall in 55 days was 0.79 inch, July 23d and September 15th, inclusive, 1881.

WEEKLY RAIN-FALL AND MELTED SNOW.

WEEK OF YEAR.		GREATEST FALL.		LEAST FALL.		Av. 40 Yrs.
No.	Ending.	Inches.	Year.	Inches.	Year.	Inches.
1	January 7,	2.64	1874	0.02	1866	0.66
2	" 14,	1.96	1870	0.01	1894	0.54
3	" 21,	1.81	1864	0.02	1856	0.66
4	" 28,	1.77	1876	0.00	1892	**0.51**
5	February 4,	1.99	1878	0.03	1866	0.56
					1882	
6	" 11,	4.54	1887	0.02	1877	0.74
7	" 18,	1.80	1891	0.00	1875	0.68
8	" 25,	2.39	1874	0.52	1864	0.64
9	March 4,	1.99	1875	0.00	1886	0.55
					1894	
10	" 11,	1.84	1868	0.02	1858	0.56
11	" 18,	1.94	1878	0.00	1889	0.59
12	" 25,	**1.53**	1859	0.03	1895	0.61
13	April 1,	1.98	1877	0.00	1893	0.81
14	" 8,	2.09	1873	0.01	1877	0.59
15	" 15,	2.89	1859	0.00	1877	0.71
16	" 22,	2.55	1870	0.00	1886	0.64
					1890	
17	" 29,	2.08	1880	0.00	1888	0.57
					1891	
					1892	
18	May 6,	4.29	1892	0.00	1859	0.88
19	" 13,	2.71	1858	0.00	1871	0.68
					1879	
20	" 20,	5.58	1893	0.00	1885	0.87
21	" 27,	3.26	1883	0.00	1857	0.82
					1881	
22	June 3,	2.89	1891	0.00	1864	1.08
					1873	
					1884	
					1895	
23	" 10,	5.43	1881	0.00	1862	**1.10**
					1864	
					1867	
24	" 17,	5.14	1857	0.00	1860	0.71
					1864	
					1884	

WEEKLY RAIN-FALL AND MELTED SNOW.

(CONTINUED)

WEEK OF YEAR.		GREATEST FALL.		LEAST FALL.		Av. 40 Yrs.
No.	Ending.	Inches.	Year.	Inches.	Year.	Inches.
25	June 24,	5.15	1866	0.00	1858 1861 1865 1872 1880	0.80
26	July 1,	3.07	1880	0.00	1871 1884 1886 1887	0.90
27	" 8,	2.95	1878	0.00	1855 1868 1886 1888	0.85
28	" 15,	3.23	1880	0.00	1859 1866 1868	0.79
29	" 22,	4.71	1872	0.00	1856 1864 1868 1878 1884	0.72
30	" 29,	3.29	1870	0.00	1859 1866 1871 1887	0.78
31	August 5,	3.15	1875	0.00	1870 1874 1877	0.78
32	" 12,	2.43	1855	0.00	1864 1870 1890 1894	**0.51**
33	" 19,	2.61	1879	0.00	1865 1874 1884	0.79

WEEKLY RAIN-FALL AND MELTED SNOW.

(CONTINUED.)

WEEK OF YEAR.		GREATEST FALL.		LEAST FALL.		Av. 40 Yrs.
No.	Ending.	Inches.	Year.	Inches.	Year.	Inches.
34	August 26,	2.92	1871	0.00	1855 1856 1873 1881 1888 1893 1894	0.60
35	Septem. 2,	4.27	1877	0.00	1856 1874 1875 1876 1889 1894	0.88
36	" 9,	3.47	1870	0.00	1871 1886	0.89
37	" 16,	**6.49**	1878	0.00	1857 1870	1.00
38	" 23,	3.14	1876	0.00	1858 1867	0.76
39	" 30,	2.66	1884	0.00	1867 1885 1891 1894	0.85
40	October 7,	2.26	1870	0.00	1866 1882	0.77
41	" 14,	3.25	1893	0.00	1865 1871	0.75
42	" 21,	2.57	1877	0.00	1874 1889 1894	0.64
43	" 28,	2.91	1878	0.05	1887	0.71
44	Novem. 4,	2.73	1861	0.00	1887	0.66
45	" 11,	3.48	1857	0.00	1865 1883	0 87
46	" 18,	2.43	1879	0.00	1865	0.88

WEEKLY RAIN-FALL AND MELTED SNOW.

(CONCLUDED)

WEEK OF YEAR.		GREATEST FALL.		LEAST FALL.		Av. 40 Yrs.
No.	Ending.	Inches.	Year.	Inches.	Year.	Inches.
47	Novem. 25,	1.67	1862	0.02	1882	0.66
48	Decem. 2,	2.04	1869	0.06	1871	0.72
49	" 9,	2.28	1878	0.05	1881	0.64
50	" 16,	3.03	1873	0.01	1871	0.66
51	" 23,	1.93	1881	0.00	1894	0.60
52	" 31,	1.96	1862	0.06	1860	0.63

MONTHLY RAIN-FALL AND MELTED SNOW.

MONTH.	GREATEST FALL.		LEAST FALL.		Av. 40 Yrs.
	Inches.	Year.	Inches.	Year.	Inches.
January, - -	6.15	1870	0.99	1872	2.54
February, - -	7.54	1887	0.25	1877	2.63
March, - - -	5.89	1877	0.62	1856	2.84
April, - - -	5.80	1860	0.98	1863	2.72
May, - - -	8.72	1892	0.75	1877	3.84
June, - - -	10.33	1855	0.34	1864	4.01
July, - - -	10.15	1870	0.45	1868	3.52
August, - - -	7.83	1871	0.28	1881	3.09
September, - -	9.25	1878	1.03	1871	3.79
October, - -	6.74	1890	0.74	1886	3.05
November, - -	5.39	1857	0.86	1865	3.28
December, - -	5.09	1873	1.43	1861	2.75
Year, - - -	49.66	1878	25.28	1856	38.08

SNOW-FALL.

The most remarkable snow-storm noted in this record of 40 years, occurred January 31st, 1878, between the hours of 4 a. m. and 9 p. m., in which time there fell 22 inches of snow, 18 inches of which fell between 8 a. m. and 4 p. m.—8 hours—and 4 inches in twenty minutes. This snow melted produced 1.98 inches of water.

Of ordinary snow, about 10 inches will make one inch of water.

December 16th, 1882, there fell 2.5 inches of snow, which made 0.07 inch of water, or at the rate, 37 inches of snow to make one inch of water.

Of the first snow-fall of the season, the earliest occurred September 30th, 1888, and the latest November 29th, 1865.

Of the last snow-fall of the season, the latest occurred May 9th, 1885, and the earliest, March 24th, 1878.

The greatest total snow-fall for the season occurred during the winter of 1880-'81, showing depths for months as follows :

November,	1880,	- -	14.4 inches.
December,	1880,	- -	14.6 "
January,	1881,	- -	20.9 "
February,	1881,	- -	24.4 "
March,	1881,	- -	23.2 "
April,	1881,	- -	4.3 "
Total for the season,		-	101.8 inches.

The least total snow-fall for the season occurred during the winter of 1865-'6, showing depths per months as follows :

November,	1865,	- -	0.1 inch.
December,	1865,	- -	2.2 "
January,	1866,	- -	6.1 "
February,	1866,	- -	4.9 "
March,	1866,	- -	9.2 "
April,	1866,	- -	0.1 "
Total for the season,		- -	22.6 inches.

The snow-fall per month has been as follows:

MONTH.	GREATEST.		LEAST.		40 Years' Average.
	Inches.	Year.	Inches.	Year.	
September, -	0.2	1888	none	40 yrs.	trace
October, - -	5.6	1878	none	22 yrs.	0.8
November, -	18.3	1874	none	1855	7.3
December, -	36.4	1886	0.3	1889	10.3
January, - -	31.7	1878	1.7	1858	12.8
February, - -	24.4	1881	0.5	1877	10.5
March, - -	24.0	1877	1.1	1871	9.5
April, - - -	16.8	1857	none	8 yrs.	3.5
May, - - -	1.4	1875	none	35 yrs.	0.1
Season, -					54.8

CLOUDINESS OF THE SKY.

In the following statement the varied average cloudiness of the sky is illustrated by a ratio, in which 0.0 stands for a **clear sky,** and 10.0 for the sky entirely obscured by clouds.

Cloudiness for month, season and year:

MONTH.	MAXIMUM.		MINIMUM.		Average Ratio.
	Ratio.	Year.	Ratio.	Year.	
January, - -	8.8	1871 1891	6.2	1857 1864 1885	7.6
February, - -	8.5	1884	5.4	1877	7.2
March, - -	8.0	1870 1876	5.0	1860	6.8
April, - - -	7.3	1873	4.3	1877	6.0
May, - - -	7.3	1892	4.2	1880	5.4
June, - - -	7.1	1869	3.5	1864	5.0
July, - - -	6.7	1869	3.3	1890 1892 1894	4.6
August, - -	5.6	1875 1879 1886	3.2	1889	4.5
September, -	7.5	1876	3.3	1891 1892	5.1
October, - -	7.6	1881 1890	4.1	1871	6.2
November, -	9.4	1858	6.1	1893	7.6
December, -	9.3	1879	5.5	1891	7.9
Spring, - -	7.0	1869	5.3	1877	6.1
Summer, - -	6.3	1869	3.6	1893	4.7
Autumn, - -	7.6	1876	5.1	1893	6.3
Winter, - -	8.3	1869-70 1892-3	6.4	1891-2	7.6
Year, - - -	6.9	1869	5.6	1856	6.2

In the following table is illustrated the average cloudiness of the sky at 7 a. m., 2 p. m. and 9 p. m., during the different months of the year and for the year ·

MONTH.	7 A. M.	2 P. M.	9 P. M.
January, - -	8.1	7.7	7.0
February, - -	7.7	7.3	6.6
March, - -	7.2	6.9	6.4
April, - - -	6.4	6.1	5.4
May, - - -	5.6	5.6	4.7
June, - - -	5.5	5.2	4.3
July, - - -	4.9	4.9	4.0
August, - -	4.9	4.9	3.6
September, -	5.5	5.5	4.4
October, - -	6.6	6.5	5.6
November, -	7.9	7.7	7.0
December, -	8.5	8.0	7.4
Year, - - -	6.6	6.4	5.5

WINDS.

In the following table the amount or proportion of wind directions are represented in 100ths. Mean for 40 years:

Month. Season. Year.	DIRECTION OF THE WIND.																											
	7 A. M.								2 P. M.								9 P. M.								Average.			
	N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	NW
March, -	9	9	5	13	23	12	14	15	14	13	2	7	13	9	21	21	9	12	6	12	22	7	18	14	10	11	4	11	19	9	18	17
April, - -	10	12	4	15	26	10	12	11	17	24	1	6	11	6	16	19	10	18	5	14	26	7	13	7	12	18	3	12	21	8	14	12
May, - -	14	11	2	13	30	12	9	9	25	21	1	4	10	7	13	19	12	16	5	13	33	6	10	5	17	16	3	10	24	8	11	11
Spring, -	11	11	4	13	26	11	12	12	19	19	1	6	11	7	17	20	10	15	5	13	27	7	14	9	13	15	3	11	22	8	14	14
June, - -	10	7	3	16	31	15	12	6	26	18	1	3	10	9	15	18	8	9	4	16	39	10	10	4	15	11	3	12	27	11	12	9
July, - -	9	9	3	13	38	15	8	5	32	16	1	2	8	7	12	22	10	8	4	13	47	7	7	4	17	11	3	9	31	10	9	10
August, -	7	7	4	18	41	11	6	6	33	18	1	3	9	6	9	21	8	8	4	17	45	6	7	5	16	11	3	13	31	8	7	11
Summer, -	9	8	3	16	36	13	9	6	30	17	1	3	9	8	12	20	9	9	4	15	44	7	8	4	16	11	3	11	30	10	9	10
September,	6	5	5	24	40	9	4	7	22	18	2	5	16	8	12	17	7	8	5	17	38	9	8	7	12	10	4	15	32	9	8	10
October, -	8	5	4	17	37	14	6	9	15	12	2	7	20	13	15	16	9	6	2	13	39	10	12	9	10	8	3	12	32	12	11	11
November,	6	4	3	14	35	18	9	11	9	7	3	8	24	18	17	14	6	4	4	11	34	15	16	10	7	5	3	11	31	17	14	12
Autumn, -	7	5	4	18	37	14	6	9	15	12	2	7	20	13	15	16	7	6	4	14	37	11	12	9	10	8	3	13	32	13	11	11
December,	4	5	3	15	30	20	13	10	5	6	3	11	23	18	22	12	4	5	4	11	30	15	22	9	4	5	3	12	28	18	19	11
January, -	6	6	3	11	31	19	15	9	6	8	3	8	24	16	23	12	7	7	4	9	29	16	20	8	6	7	3	10	28	17	19	10
February, -	6	7	4	13	28	14	16	12	11	9	2	8	20	13	23	14	6	9	4	11	31	10	18	11	8	8	3	11	26	12	19	13
Winter, -	5	6	3	11	28	17	19	11	7	8	3	9	22	15	23	13	6	7	4	10	30	14	20	9	6	7	3	11	27	16	19	11
Year, - -	8	8	3	15	32	14	11	9	18	14	2	6	15	11	17	17	8	9	4	13	35	10	13	8	11	10	3	12	27	12	14	11

The following table shows the greatest average proportion of wind directions, in 100ths, contained in any quarter of the circle in 40 years:

MONTH.	7 A. M.				2 P. M.				9 P. M.				MEAN.			
March, - - -	S	SW	W	49	W	NW	N	56	S	SW	W	47	S	SW	W	46
April, - - -	SE	S	SW	51	NW	N	NE	60	SE	S	SW	47	NW	N	NE	42
May, - - -	SE	S	SW	55	NW	N	NE	55	SE	S	SW	52	NW	N	NE	44
Spring, - - -	SE	S	SW	50	NW	N	NE	58	S	SW	W	48	S	SW	W	44
June, - - -	SE	S	SW	62	NW	N	NE	62	SE	S	SW	65	SE	S	SW	50
July, - - -	SE	S	SW	66	NW	N	NE	70	SE	S	SW	67	SE	S	SW	50
August, - - -	SE	S	SW	70	NW	N	NE	72	SE	S	SW	68	SE	S	SW	52
Summer, - -	SE	S	SW	65	NW	N	NE	62	SE	S	SW	66	SE	S	SW	51
September, -	SE	S	SW	72	NW	N	NE	57	SE	S	SW	65	SE	S	SW	56
October, - -	SE	S	SW	68	S SW W NW		W N	48 46	SE	S	SW	62	SE	S	SW	56
November, -	SE	S	SW	67	S	SW	W	59	S	SW	W	65	S	SW	W	62
Autumn, - -	SE	S	SW	69	S	SW	W	48	SE	S	SW	62	SE	S	SW	58
December, - -	SE	S	SW	65	S	SW	W	65	S	SW	W	67	S	SW	W	65
January, - -	S	SW	W	65	S	SW	W	63	S	SW	W	65	S	SW	W	64
February, - -	S	SW	W	58	S	SW	W	56	S	SW	W	59	S	SW	W	57
Winter, - - -	S	SW	W	56	S	SW	W	60	S	SW	W	64	S	SW	W	62
Year, - - -	SE	S	SW	61	W	NW	N	52	SE	S	SW	58	S	SW	W	51

What gain we by **this flood of facts?**
Can we **forecast** God's wondrous acts?
No! what has passed we'll see **no** more,
But **wonder** what is still in store.

The foregoing is Meteorological History. History never repeats itself, and the grouping of forces which produced the weather during the past forty years will never be so repeated.

The statistics contained in the foregoing paper are interesting in that they summarize a forty years' record of varied atmospheric conditions, but they reveal no true cycles which will enable us to make predictions for the future.

Of course the seasons will come and go as they always have, and exhibit the peculiar conditions that belong to each of them, but the deviations from normal will likely be as astonishing in the future as in the past, and as much at variance with the seasonable as wonderful in extent.

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